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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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4743	7590	01/19/2006	EXAMINER	
MARSHALL, GERSTEIN & BORUN LLP			SHAH, MILAP	
233 S. WACKER DRIVE, SUITE 6300			ART UNIT	
SEARS TOWER			PAPER NUMBER	
CHICAGO, IL 60606			3714	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/827,042

Applicant(s)

MARTINEK ET AL.

Examiner

Milap Shah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 48-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 48-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

+DETAILED ACTION

This action is in response to amendment received on February 14, 2005. The Examiner acknowledges that claims 1-47 have been canceled and new claims 48-63 have been added. Thus, claims 48-63 are currently pending.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 48-63 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over new claims 58-73 of copending Application No. 09/520,405 submitted in an amendment received on December 2, 2004. Although the conflicting claims are not identical, they are not patentably distinct from each other because when claims in one application are so close in content to claims in another application that they both cover the same subject matter, despite a slight difference in wording, it is proper to apply obvious-type double patenting. The claims of co-pending Application No. 09/520,405 recite "...a computerized wagering

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game controller comprising a processor with a memory and an operating system stored in said memory...” and the claims of the instant application recite “...a universal operating system stored in memory of a computerized controller comprising...” which are considered to be equivalent, despite the slight difference in wording. Thus, claims 48-63 of the instant application are considered to be similar, if not identical, to claims 58-73 of co-pending Application No. 09/520,405.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 48-50, 54, 59, 61, & 63 are rejected under 35 U.S.C. 102(e) as being anticipated by Mathur et al. (U.S. Patent No. 6,671,745).

Claims 48 & 59: Mathur discloses the same invention including a universal operating system stored in a memory of a computerized controller, and including the following features:

- i. The computerized controller having a processor, memory, and a nonvolatile storage (figure 2).

- ii. An operating system kernel that executes a system handler application, the system handler application operable to dynamically link with at a plurality of gaming program shared objects and load the program shared objects (figures 2 & 3; column 4, lines 7-12, column 6, lines 28-65, & column 9 line 48 – column 10, line 24).
- iii. A system handler having an event queue (column 7, lines 6-10 & lines 57-62; column 8, lines 62-65 & column 9, lines 25-26).
- iv. A system handler application having an Application Program Interface (API) having functions callable from the program shared object, the API having a plurality of functions callable by and used by at least some of the shared objects (See id)
- v. System handler application operable to initiate a program based on data variables stored in the nonvolatile storage the system handler application operable to write data variables to state storage and nonvolatile storage (column 5, lines 1-26 & column 8, lines 36-65). Specifically, Mathur discloses a process management system, which can load and organize applications within the system (column 7, lines 59-60).
- vi. An operating system controlled by a general-purpose computer (column 4, lines 22-30).
- vii. Nonvolatile storage stores program variables, such that loss of power does not result in loss of the state of the computerized system (column 5, lines 1-26 & column 8, lines 36-65).
- viii. A system handler application that loads a first shared object and the first shared object calls up a function from within an API (figure 2, figure 3, & column 10, lines 13-31).

- ix. A file storage system for organizing data for retrieval and use (figure 2, element 218).

Claim 49: Mathur discloses a system handler application comprising an event handler, which handles events (column 8, lines 62-65).

Claim 50: Mathur discloses a system handler unloading, loading and executing program shared objects (column 7, line 56 – column 8, line 15). Specifically, Mathur discloses a process management system, which can load and organize applications within the system (column 7, lines 59-60).

Claim 54: Mathur discloses a plurality of APIs (figures 2 & 3).

Claim 61: Mathur discloses that the execution of the operating system loads and operates the system handler application, the system handler application operable to dynamical link with a plurality of program shared objects and load said shared objects the system handler application having an API having a plurality of functions callable from at least some of the shared objects; the system handler application operable to initiate an software application based on data variables stored in a nonvolatile storage and the system handler application operable to write data variables to the nonvolatile storage; the system handler application then loading a first shared object and providing an API functions called by the first shared object, the system handler application then executing the first shared object (figures 2 & 3, column 2, line 56 – column 3, line 36, column 6, lines 28-65, column 8, lines 35-65, & column 10, lines 17-24).

Claim 63: Mathur discloses a system handler application comprising an event handler, which handles events (column 8, lines 62-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 51 & 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathur, as applied to claim 48 above, in view of Brunner et al. (U.S. Patent No. 4,727,544).

Claims 51: Mathur discloses a system handler that stores data variables modified by program shared objects in non-volatile storage and state storage to ensure data is not lost during a critical failure such as a power loss (column 8, lines 15-46). Mathur does not describe, verifying the code for a shared object has not changed. Gaming regulations require that controllers include mechanisms to verify executable code and data, which may affect payouts or game outcomes. Brunner, for example, teaches that known gaming devices include memory-checking software, which is implemented when a device is powered-up to detect unauthorized memory changes (column 1, lines 13-32). The level (e.g. kernel, operating system or application) at which such software is implemented is within purview of the designer. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the special purpose controller disclosed by Mathur, wherein the system handler executes a program to store application and state data to prevent loss after a power failure, to add the feature of verifying this code for shared objects has not changed in order to meet gaming regulations which require that controllers include mechanisms to verify executable code and data which may affect payouts or game outcomes.

Claim 52: Mathur discloses an index of pointers that associate variable names with data locations (column 7, lines 4-9). Data may be stored in non-volatile memory (column 5, lines 1-41 & column 8, lines 36-46).

Claims 53 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathur in view of Brunner, as applied to claim 61 above, further in view of Pascal (U.S. Patent No.5,971,851).

Claims 53 & 62: The combination of Mathur with Brunner describes all the features of the claim except causing the execution of a corresponding callback function when a data variable is changed into non-volatile storage. Pascal discloses an analogous operating system for a gaming device wherein callbacks are employed to communicate information between application modules upon the occurrence of certain events (column 1, line 44 – column 2, line 30). In general, callback routines are used in state-based machines to communicate data between independent modules upon the occurrence of predetermined events (column 6, lines 25-45). Pascal describes using callback to enhance the robustness of a gaming device under fault conditions to protect data that may affect the outcome of a game payout (column 2, lines 25-30). In view of Pascal, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the customized gaming operating system suggested by the combination of Mathur with Brunner, wherein the system enhance security by monitoring application modules, to execute a callback function corresponding to a change in game data stored in non-volatile memory to enhance the security of the gaming device by monitoring changes in data that might affect the outcome of the game payout and thereby provide a more secure gaming device that is resistant to errors caused by losses in power or tampering.

Claims 55-57 & 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathur as applied to claim 48 above, in view of Official Notice.

Claim 55: Mathur discloses an operating system, but it is not Linux. The Examiner takes Official Notice that Linux is a well-known, commercially available operating system that is substitutable for the same purpose as the operating system describe by Mathur. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the controller disclosed by Mathur to substitute the Linux operating system in order to use an open-source, freely modifiable operating system, giving a developer more freedom to customize software to suit the needs of a situation.

Claims 56 and 57: Mathur discloses shared objects including device handlers wherein at least one device handler for a device is disabled, where a device handler is generic and may control many different types of devices (column 3, lines 5-22 & column 9, line 48 – column 10, line 49).

Claim 60: Mathur discloses a system handler application, which loads and executes shared objects wherein the shared objects are operable to share data via program variables stored in non-volatile storage (figure 2, figure 3, & column 5, lines 1-41). Mathur states that different applications require different numbers of shared objects (column 2, lines 18-49). Because of this, Mathur anticipates that any number of shared objects, including one, may be executed at a time, for a range of purposes, including for a system employing large objects that require the controller's full resources.

Claim 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mathur in view of Official Notice, as applied to claim 57 above, further in view of Angelo (U.S. Patent No. 5,944,821).

Claim 58: Mathur discloses a computerized game controller as described above, but does not disclose a hashing function for an operating system and system handler. Angelo teaches a method of storing secure hash values of operating system programs, programs, which include an operating system and system handler (column 3, line 18). Implementing a hashing function throughout an operating system enhances security within the operating system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the computerized game controller of Mathur with the secure hashing method for operating system programs as taught by Angelo in order to ensure the integrity of a computerized game controller and increase security within the operating system.

Response to Arguments

Any arguments with respect to canceled claims 1-47 are now moot in view of the cancellation of these claims. New claims 48-63 were added, and Applicant's arguments about new claims 48-63 are not persuasive with respect to the Mathur reference.

The applicant argues that the claimed invention distinguishes over the prior art because Mathur does not disclose any relationship between an operating system, system handler, shared objects, or device handlers. The Examiner respectfully disagrees. Mathur discloses an interaction between an operating system and a system handler, which is analogous to a process scheduler, where shared programs are loaded into memory (column 7, lines 61-67 & column 8, lines 1-5) as well as linked into proper locations in memory to protect the operation of each individual shared program (column 8, lines 6-90). Mathur also discloses device handlers, which allow an operating system to

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communicate with system hardware (column 6, line 24). With regard to the specific construction of each sub-system or section of the whole system as disclosed by Mathur, the bounds of the operating system, the system handler, and the application program interface portions of the mentioned system are made clear and definite without an explicit definition. It is for the above stated reasons of functional completeness and equivalence to the applicant's claimed invention of functionality that Mathur is properly applicable to Applicant's claims as pertinent prior art. Because Mathur includes the above features, it is not necessary for any secondary reference (i.e. Brunner, Pascal, or Angelo) to also contain those features. Since claim rejections involving the above mentioned patents were made under 35 USC § 103, it is only necessary to illustrate that one of ordinary skill in the art would have known how to combine the two references and arrive at the claimed invention.

Therefore, for all of the reasons given above, claims 48 – 63 are rejected.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Milap Shah whose telephone number is (571) 272-1723. The examiner can normally be reached on M-F: 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Jones can be reached on (571) 272-4438. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



M.B.S.